Before the
Federal Communications Commission
Washington, DC 20554

In the Matter of	)	
	)	
Expanding Flexible Use in Mid-Band Spectrum	)	GN Docket No. 17-183
Between 3.7 and 24 GHz	)	

REPLY COMMENTS OF NXP SEMICONDUCTORS

1. INTRODUCTION

NXP Semiconductors ("NXP") provides the below reply comments to *the Expanding Flexible Use in Mid-Band Spectrum Between 3.7 and 24 GHz Notice of Inquiry* adopted by the Federal Communications Commission (the "Commission") on August 3, 2017 (the "NOI"), specifically potential WiFi services in the 3.7-4.2 GHz and 5.925-7.125 GHz bands.

NXP is a high-performance mixed-signal semiconductor company engaged with Security, Connectivity, Industrial, and Automotive products. NXP has developed and is continuing to develop Ultra Wide Band ("UWB") Real-Time Location System ("RTLS") technology for its target applications.

2. USE OF 3.7-4.2 GHZ AND 5.925-7.125 GHZ BANDS FOR RTLS

Within the 3.7-4.2 and 5.925-7.125 GHz bands, NXP has developed, at great financial expense over several years of R&D, state-of-the-art RTLS technology targeted for domestic and international sale in the market verticals noted above. As a company, we have concluded that UWB systems, operating unlicensed under FCC PART 15 Subpart C Section 15.250, and/or under Subpart F, provide distance measurement and localization/positioning performance that is unique among radio systems and therefore best suited as basis for our RTLS products. It is our understanding that several of the companies providing comments on the NOI have observed similar benefits of UWB technology and are advocating continued use of such technology. NXP supports these comments.

The unique distance measurement and localization/positioning performance of UWB systems, being high distance measurement accuracy combined with high measurement update rates and/or short radio messages and associated low measurement latency, is well known among experts. As UWB RTLS technology is typically able to operate in indoor environments, UWB is a natural choice to complement GPS technology, where GPS is typically limited to outdoor environments.

3. CONCLUSION

NXP requests the Commission consider 3.7-4.2 GHz band and 5.925-7.125 GHz band not be opened to U-NII usage due to the likely RF interference these new transmitters will cause to existing deployed equipment and systems operating unlicensed under FCC PART 15 Subpart C Section 15.250 and/or Subpart F. Or, any new unlicensed users allowed should also be subject to the -41.3 dBm/MHz power limit so those financially invested in these regulations presently are not put in a position where those technologies are put in a competitive disadvantage to new higher power products and/or needing to re-certify to new or replacement FCC regulations at great expense.

NXP considers it especially important to keep the 5.925-7.125 GHz band available for UWB systems, as systems operating unlicensed under FCC PART 15 Subpart C Section 15.250 are limited to this band.

Respectfully submitted,

NXP Semiconductors

November 1, 2017